

CLAIMS

What is claimed is:

1. A cell microchip comprising a plastic substrate which a micro flow channel is formed thereon.
2. The cell microchip according to claim 1, wherein a cross-section of the micro flow channel is rectangular, triangular, circular, oval or a cross-sectional shape thereof.
3. The cell microchip according to claim 2, wherein a long or short side or a diameter of the cross-section of the micro flow channel is 2 to 200 μ m.
4. The cell microchip according to any one of claims 1 to 3, wherein the micro flow channel has one or more junctions.
5. The cell microchip according to claim 4, wherein the junction is a 3-pronged junction composed of a flow channel (A), a flow channel (B) and a flow channel (C).
6. The cell microchip according to any one of claims 1 to 5, wherein the micro flow channel constitutes one measurement system using cells, and multiple measurement systems are formed on the plastic substrate.
7. The cell microchip according to any one of claims 1 to 6, wherein the plastic substrate is formed from an epoxy resin.
8. The cell microchip according to any one of claims 1 to 7, which has a haze value of 10% or less.
9. The cell microchip according to any one of claims 1 to 8, which has a light transmittance of 88% or more.
10. A method of measurement using cells, which comprises using the cell microchip according to any one of claims 1 to 9.

11. A biological assay method, which comprises using the cell microchip according to any one of claims 1 to 9.
12. A method of assaying the action of a chemical on cells by using a cell microchip wherein a flow channel (A), a flow channel (B), a flow channel (C) into which the flow channels (A) and (B) are merged, and a micro flow channel having a 3-pronged junction composed of the three flow channels are formed on a plastic substrate, which comprises filling one of the flow channels (A) and (B) with a medium to allow cells to grow or live therein, and injecting a chemical-containing solution into the other to contact the chemical with the cells, wherein the flow channel (C) is a passage of the medium or solution or a zone for assaying the action of the chemical.
13. The method of assaying the action of a chemical according to claim 12, wherein the contact of the cells with the chemical is carried out at the 3-pronged junction.
14. The method of assaying the action of a chemical according to claim 12 or 13, wherein the cells, starting from one or more cells, grow or live linearly in a single layer in the flow channel (A) or (B) that is a flow channel for proliferating or surviving the cells.
15. The method of assaying the action of a chemical according to any one of claims 12 to 14, wherein the action of a chemical on cells is examined more than once by using a cell microchip having multiple micro flow channels formed on the plastic substrate.